Zero to Twenty Million

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The Mathematical Scaling Engine asks three numbers to compound across one decade. Each one comes with a catch the public record exposes.

Tesla's Q2 2026 earnings call landed on July 22. As of July 23, the day after, Tesla's Optimus production count stood at exactly zero. Not zero units sold — zero units built on a real production line, ten months after Musk posted on X: “~80% of Tesla's value will be Optimus.” The previous essay in this series (The Abundance Machine) examined what that bet costs, quarter by quarter, inside Tesla's own financial statements. This essay asks a narrower question: do the specific decade-scale numbers behind that bet actually add up?

Master Plan 4 organizes the answer into what Tesla itself calls a mathematical scaling engine — three fronts, energy, transport, and labor, each required to compound through a series of cost-halving doublings between 2026 and 2035, timed closely enough together that the gains stack rather than arrive one at a time. A compounding case like that rests entirely on the starting numbers for each front and the endpoint targets attached to each. Pull each front's numbers from the public record, separate from Tesla's own framing, and a pattern emerges: none of the three inputs match what independent reporting and published research actually show.

Start with energy. The 240-terawatt-hour storage figure comes from Tesla, but not from the plan this essay has been examining. Tesla published that number in Master Plan Part 3, back in April 2023, alongside a target of 30 terawatts of renewable generation and $10 trillion in capital investment. Master Plan 4, released in September 2025, never restates a specific storage figure; coverage of the newer plan simply keeps citing the two-year-old number. Age alone doesn't disqualify a figure, but the outside record has moved on since 2023. BloombergNEF and DNV both project cumulative global battery storage reaching somewhere between 1.6 and 1.9 terawatt-hours by 2030 — a fraction of one percent of Tesla's 2023 total. The IEA's Net Zero Emissions scenario calls for storage capacity to grow sixfold by 2030, reaching roughly 1,500 gigawatts of power capacity, still nowhere near the scale Tesla's 2023 plan assumed. Even the most aggressive long-horizon estimates, modeling a fully electrified global grid, put dedicated storage need at something on the order of 100 terawatt-hours — by 2100, not the mid-2030s. Three years after Tesla published 240 terawatt-hours as the target, independent researchers still project a fraction of that figure on a far longer clock.

Move to transport, and the target itself has already changed once. Musk set the original goal in 2020: 20 million vehicles sold per year by 2030. Tesla repeated that number in the company's 2021

and 2022 impact reports, then quietly deleted the language in 2024, after two consecutive years of falling short. Full-year 2025 deliveries came in at 1.636 million vehicles, down 8.6 percent from 1.79 million in 2024 — Tesla's second straight annual decline. The 20-million figure survived, but the meaning shifted. Master Plan 4 now frames 20 million as vehicles in operation by 2029 or 2030, a cumulative fleet count that includes every Model 3 and Model Y already on the road, not a new annual production rate. Cybercab carries a separate manufacturing target: 2 million units a year at full scale, not 20 million. A production trend running backward for two straight years, paired with a fleet-size figure quietly substituted for a production-rate figure, does not match the claim the 2020 announcement made.

The cost figures inside that transport math hold up better, at least the ones Musk actually said in public. At the October 2024 “We, Robot” event, Musk priced Cybercab under $30,000 and projected an operating cost near $0.20 a mile. Both numbers trace to a direct, on-record quote. A separate claim circulating in secondary commentary — that Cybercab costs $19,000 to manufacture against $30,000 in annual recurring software revenue — traces to no Musk statement or Tesla filing found anywhere in the public record. That specific pairing of numbers looks like downstream extrapolation dressed up as a company projection.

Labor carries the largest gap between claim and count. Tesla's own official target for 2026 sits at 50,000 to 100,000 Optimus units, scaling toward an eventual 10-million-unit annual capacity at a planned Giga Texas line around 2027. The most credible independent reporting, from The Information in mid-2025, put cumulative Optimus builds at only a few hundred units total. Musk himself, on the January 2026 fourth-quarter call, described the existing units as built “primarily for learning, not productive tasks.” Tesla's April 2026 call projected Fremont production beginning “late July or August.” As of July 23, that production remained unstarted. Ten months after Musk's claim that Optimus represents 80 percent of Tesla's value, the actual production count sits at zero.

None of this disproves the physics the first essay in this series described. Solar, batteries, and robotics genuinely follow Wright's Law — cost falling with every doubling of cumulative production, a curve that owes nothing to any single company's press releases. What breaks down under scrutiny sits one level below the physics, in the specific decade-scale arithmetic Tesla chose to publish. A scaling engine that asks three inputs to compound together within a single decade needs each input's starting number to be real and each target number to trace to something. The energy figure traces to a two-year-old Tesla plan, not to any independent forecast on the same timeline. The transport figure quietly swapped a production-rate claim for a fleet-size claim after five years of the original claim moving the wrong direction. The labor figure, the one Musk called 80 percent of the company's entire value, currently stands at zero produced units.

The physics that makes an abundance economy possible never required a specific 240 terawatt-hours, a specific 20 million vehicles, or a specific decade. Wright's Law only requires that production keep doubling and cost keep falling — a process with no calendar and no company's name attached. The 2026–2035 timeline, the terawatt-hour target, the vehicle count: those numbers belong to Tesla's own roadmap, not to the underlying physics, and a roadmap claims a future execution, not a confirmed measurement anyone outside the company has made. The gap between the two does not sit in the physics. The gap sits entirely inside the arithmetic Tesla published — and as of this week, at least one of the three load-bearing numbers in that arithmetic still sits at zero.

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